

REMARKS

In the non-final office action mailed January 27, 2006, claims 1-80 were pending. Claims 6, 7, 10-12, 16, 17, 22-26, 30, 33, 39-44 and 49-80 were withdrawn as being directed to a non-elected invention. Claims 21, 31, 32 and 34 were objected to but indicated to be allowable if rewritten in independent form incorporating the base claim and any intervening claims. Claims 1-5, 8, 9-13-15, 18-20, 27-29, 35-38 and 45-48 stand rejected. In this response, claims 1, 2, 8, 18, 19, 22, 27, 37, 39, 45 and 46 have been amended, claims 40 and 51-80 have been cancelled without prejudice to pursuit in a continuing or divisional application, and claims 81-101 have been added. Reconsideration of the present application as amended and including claims 1-39, 41-50 and 81-101 is respectfully requested.

Claim 2 was objected to for an informality in the first line where a word was omitted after the word "said". Claim 2 has been amended in line 1 to recite "said body" as assumed in the office action. Withdrawal of the objection to claim 2 is respectfully requested.

Claims 1-5, 8-9, 13, 14, 18, 27-29, 37 and 45-48 were rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 2,580,821 to Nicola. Nicola discloses a bone fracture compression plate that includes a body with opposite spring sections 4 that are compressed transversely to the longitudinal axis of the plate prior to attachment of the plate to the fractured bone section in order to move the opposite ends of the plate away from one another. After the plate is attached, the spring sections draw the ends of the plate toward one another in order to compress the bone portions together. See col. 2, lines 23-48. Accordingly, the plate in Nicola has a length sized to maintain the bone segments in a constant state of contact and compression in order to promote healing and growth of the bone segment together.

Claim 1, in contrast, has been amended to clarify the structural features associated with the implant that maintain separation of the adjacent vertebrae and distract the spinal column segment when attached thereto. Claim 1 recites "a body including first and second ends along a longitudinal axis spaced by a length sized for attachment to respective ones of first and second vertebrae along surfaces of the first and second vertebrae comprising a concavely curved surface of the spinal column segment, said body being structured with said length further sized so that said body maintains separation of the first and second vertebrae when attached to the first and second vertebrae to distract the spinal column segment along the concavely curved surface

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toward a straightened configuration while permitting motion of the spinal column segment when attached to the first and second vertebrae." Nicola fails to disclose, among other features, a body with first and second ends spaced by a length sized for attachment to first and second vertebrae. Nicola also fails to disclose or suggest a body with a length sized to maintain separation of the first and second vertebrae when attached thereto to distract the spinal column segment while permitting motion of the spinal column segment. Rather, the plate in Nicola includes a length relative to the bone section sized to maintain the bone portions in compression and in contact with one another to promote healing and bone growth. Accordingly, Nicola fails to disclose the elements recited in claim 1, and withdrawal of this basis of the rejection of claim 1 is respectfully requested.

Claims 2-5, 8-9, 13, 14, and 18 depending from claim 1 were also rejected as being anticipated by Nicola. These claims are believed to distinguish Nicola at least for the reasons claim 1 distinguishes Nicola, and withdrawal of the rejection of these claims is respectfully requested.

Claim 27 has been amended to clarify the structural features associated with the implant that distract vertebrae when attached to the vertebrae. Claim 27 recites "a body with a length along a longitudinal axis extending between opposite ends when said body is in a first condition, said body including a second condition wherein said body is longitudinally compressed between said opposite ends with said compressed length sized for implanting said body between the first and second vertebrae, said body including means for reforming from said second condition toward said length of said first condition when implanted and released from said compression to exert a distractive force between the first and second vertebrae and permit relative motion between the first and second vertebrae." Nicola fails to disclose the features recited in claim 27. Rather, the ends of the plate in Nicola are moved away from one another when spring sections 4 are compressed transversely to the longitudinal axis of the plate to longitudinally lengthen the plate prior to attachment to the fractured bone section. When the ends are attached to the bone portions across the fracture and compression of spring sections 4 is released, the ends of the plate are biased toward one another to apply a compressive force to the bone portions to maintain contact between the bone portions at the fracture. Accordingly, withdrawal of this basis of the rejection of claim 27 is respectfully requested.

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Claims 28, 29, and 37 depending from claim 27 were also rejected as being anticipated by Nicola. These claims are believed to distinguish Nicola at least for the reasons claim 27 distinguishes Nicola, and withdrawal of the rejection of these claims is respectfully requested.

Claim 45 has been amended to clarify the structural features associated with the implant that distract vertebrae when attached to the vertebrae. Claim 45 recites a first anchor and a second anchor and "a body positionable along surfaces of the first and second vertebrae comprising a concavely curved surface of the spinal column segment and including a length between opposite first and second ends sized for attachment to said first and second anchors, said body being structured with said opposite ends biased away from one another against said first and second anchors to distract the spinal column segment along the concavely curved surface and between the first and second anchors toward a straightened configuration while permitting motion of the spinal column segment when attached to the first and second vertebrae." As discussed above, Nicola discloses a bone plate in which the ends of the plate are biased toward one another when engaged to the fractured bone section so that the plate applies compressive forces to the bone portions to maintain the bone portions in contact with one another. Accordingly, withdrawal of this basis of the rejection of claim 45 is respectfully requested.

Claims 46-48 depending from claim 45 were also rejected as being anticipated by Nicola. These claims are believed to distinguish Nicola at least for the reasons claim 45 distinguishes Nicola, and withdrawal of the rejection of these claims is respectfully requested.

Claims 1-5, 8-9, 13, 27, 37-38 and 45-48 were rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 5,246,443 to Mai. Mai discloses a bone fracture compression device made from shape memory material with two branches that are inserted on each side of a bone fracture to be repaired and then deformed so that the branches move together under the effects of temperature to provide dynamic compression of the bone fracture. See, for example, col. 2, lines 19-28. Accordingly, the device has a length between the braches sized to maintain the bone portions in contact and compression across a fracture.

Claim 1, in contrast, has been amended as recited above to clarify the structural features associated with the implant that maintain separation of the adjacent vertebrae and distract the spinal column segment when attached thereto. Mai fails to disclose, among other features, a plate with a length sized for attachment to vertebrae. Mai also fails to disclose or suggest a body

with a length sized to maintain separation of the first and second vertebrae when attached thereto to distract the spinal column segment while permitting motion of the spinal column segment. Rather, the compression device in Mai includes a length sized to maintain the bony segments in compression and in contact with one another when implanted. Accordingly, Mai fails to disclose the elements recited in claim 1, and withdrawal of this basis of the rejection of claim 1 is respectfully requested.

Claims 2-5, 8-9, and 13 depending from claim 1 were also rejected as being anticipated by Mai. These claims are believed to distinguish Mai at least for the reasons claim 1 distinguishes Mai, and withdrawal of the rejection of these claims is respectfully requested.

Claim 27 has been amended as recited above to clarify the structural features associated with the implant that distract vertebrae when attached thereto. Mai discloses that the ends of the clip and plate are structured to move toward one another after implantation to apply a dynamic compressive force to the bone when attached thereto. Accordingly, withdrawal of this basis of the rejection of claim 27 is respectfully requested.

Claims 37 and 38 depending from claim 27 were also rejected as being anticipated by Mai. These claims are believed to distinguish Mai at least for the reasons claim 27 distinguishes Mai, and withdrawal of the rejection of these claims is respectfully requested.

Claim 45 has been amended as recited above to clarify the structural features associated with the implant that distract vertebrae when attached thereto. As discussed above, Mai does not disclose that the clip includes a length between opposite ends sized for attachment with anchors engaged to first and second vertebrae. In addition, Mai discloses a clip and plate in which the ends of the plate are moved toward one another to apply compressive forces to the bone segment. Accordingly, withdrawal of this basis of the rejection of claim 45 is respectfully requested.

Claims 46-48 depending from claim 45 were also rejected as being anticipated by Mai. These claims are believed to distinguish Mai at least for the reasons claim 45 distinguishes Mai, and withdrawal of the rejection of these claims is respectfully requested.

Claims 1-5, 8-9, 13, 19, 20, 27, 28, 35 and 36 were rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 5,785,713 to Jobe. Jobe discloses a fixation apparatus with a body portion and a plurality of leg portions extending from the body portion. The leg portions are oriented at an angle to the opposite leg portion and to the body portion so that the body

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portion can be resiliently deformed to orient the leg portions parallel to one another for insertion into the bone section. The resilient body returns toward the angled leg orientation to compress the bone section and secure the fixation apparatus to the bone section. Jobe discloses that the angled legs are used to urge portions of the bone section together to facilitate the healing process. See col. 6, line 63 to col. 7, line 3. Embodiments are discussed where the legs or posts are perpendicular to the plate, but such embodiment provide neither compression nor distraction of the bone segments to which fixation apparatus is engaged.

Claim 1, in contrast, has been amended to clarify the structural features associated with the implant that maintain separation of the adjacent vertebrae and distract the spinal column segment when attached thereto. Claim 1 recites "a body including first and second ends along a longitudinal axis spaced by a length sized for attachment to respective ones of first and second vertebrae along surfaces of the first and second vertebrae comprising a concavely curved surface of the spinal column segment, said body being structured with said length further sized so that said body maintains separation of the first and second vertebrae when attached to the first and second vertebrae to distract the spinal column segment along the concavely curved surface toward a straightened configuration while permitting motion of the spinal column segment when attached to the first and second vertebrae." Jobe fails to disclose, among other features, a plate with a length sized for attachment to vertebrae. Jobe also fails to disclose or suggest a body with a length sized to maintain separation of the first and second vertebrae when attached thereto to distract the spinal column segment while permitting motion of the spinal column segment. Rather, the fixation apparatus in Jobe includes a length relative to the bone section sized to maintain the bone portions in compression and in contact with one another to promote healing and bone growth. Accordingly, Jobe fails to disclose the elements recited in claim 1, and withdrawal of this basis of the rejection of claim 1 is respectfully requested.

Claims 2-5, 8-9, 13, 19 and 20 depending from claim 1 were also rejected as being anticipated by Jobe. These claims are believed to distinguish Jobe at least for the reasons claim 1 distinguishes Jobe, and withdrawal of the rejection of these claims is respectfully requested.

Claim 27 has been amended to clarify the structural features associated with the implant that distract vertebrae when attached thereto. Claim 27 recites "a body with a length along a longitudinal axis extending between opposite ends when said body is in a first condition, said

body including a second condition wherein said body is longitudinally compressed between said opposite ends with said compressed length sized for implanting said body between the first and second vertebrae, said body including means for reforming from said second condition toward said length of said first condition when implanted and released from said compression to exert a distractive force between the first and second vertebrae and permit relative motion between the first and second vertebrae." Jobe fails to disclose the features recited in claim 27. Rather, the ends of the body portion of the fixation apparatus are flexed about a medial axis of the body prior to insertion, and then ends are then biased toward one another, when implanted and released so that the angled legs maintain the adjacent bone portions in compression and contact with one another. Accordingly, withdrawal of this basis of the rejection of claim 27 is respectfully requested.

Claims 28, 35 and 36 depending from claim 27 were also rejected as being anticipated by Jobe. These claims are believed to distinguish Jobe at least for the reasons claim 27 distinguishes Jobe, and withdrawal of the rejection of these claims is respectfully requested.

Claims 1 and 13-15 were rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 4,263,904 to Judet. Judet discloses a circular bracelet that is configured to extend around a portion of a fractured bone which has the shape of a resilient bracelet with several support points that hold portions of a fractured bone together.

In contrast, amended claim 1 recites "a body including first and second ends along a longitudinal axis spaced by a length sized for attachment to respective ones of first and second vertebrae along surfaces of the first and second vertebrae comprising a concavely curved surface of the spinal column segment, said body being structured with said length further sized so that said body maintains separation of the first and second vertebrae when attached to the first and second vertebrae to distract the spinal column segment along the concavely curved surface toward a straightened configuration while permitting motion of the spinal column segment when attached to the first and second vertebrae." Since there is no disclosure of the arrangement of elements recited in claim 1, claim 1 and claims 13-15 depending therefrom cannot be anticipated by Judet. Accordingly, withdrawal of this basis of the rejection is respectfully requested.

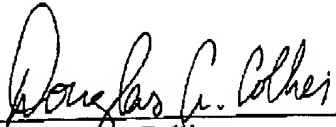
New claims 81-101 have been added in this response. Claim 81 is directed generally to the subject matter of original dependent claim 21 and is believed allowable as presented. Claims

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82-89 depending from claim 81 are also believed allowable. Claim 90 is directed generally to the subject matter of original dependent claim 31 and is believed allowable as presented. Claims 90-94 depending from claim 90 are also believed allowable. Claim 95 is directed generally to the subject matter of original dependent claim 32, and is believed allowable as presented. Claims 96-101 depend from claim 95 and are also believed allowable.

Reconsideration of the present application as amended and including claims 1-39, 41-50 and 81-101 is respectfully requested. Action toward a Notice of Allowance is hereby solicited. The Examiner is encouraged to contact the undersigned to resolve any outstanding issues with regard to the present application.

Respectfully submitted,

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